Instructor:
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Text: The textbook for this course is "**Physics and Technology for Future Presidents: An Introduction to the Essential Physics Every World Leader Needs to Know**" By Richard Muller. There is a popular book with almost the same name, by the same author, which is not the book we will use. The book should be available in the campus bookstore. The ISBN-13 number is 9780691135045

Course Goals:

- Give students the knowledge and understanding to make informed decisions about issues involving physics.
- Learn how to critically read articles about science that appear in the popular media and be able to judge what is likely to be good science.
- Understand how physics, and science in general, is performed.

It is not a course goal to make you into a mini-physicist. Rather, the idea is to present physics to you in a context that is useful in the real world. This includes physics that will help you understand issues such as: nuclear weapons, dirty bombs, the fuel economy, medical imaging, and so on. You are encouraged to ask questions, and to suggest topics to be covered. The book is fun to read and one can learn lots of interesting things from it. Even a physics major would learn lots from it, so one result of taking this course is you will learn some "physics things" that the physics majors at Rice probably don't know. One enticing example; the Bureau of Alcohol, Tobacco, and Firearms tests your beer to make sure it is radioactive. (That is not a typo, they want it to be radioactive.) You will learn why in this course. We will work our way through the textbook in sequence, and in addition discuss any current events that are related to physics as they arise during the semester.

Grades:
Homework: 20%
Reading Quizzes: 20%
Midterm Exam 1: 15%
Midterm Exam 2: 15%
Final Exam: 30%
Bonus Points Available: 10%

I reserve the right to rescale the final grades upward using an arbitrary transformation. (Ie. your grades can not go down, but I reserve the right to move them up.)

Homework (20% of your grade):
You will be assigned weekly homework. This will often involve reading the science press, and/or discussing issues arising therein. There may be brief essays or small research topics.

Reading Quizzes (20% of your grade):
It is important that you be reading the book as we go along. To encourage you to do so, there will be weekly online reading quizzes. These will be very brief multiple choice quizzes administered in owlspace to test that you have actually read the book. These are not meant to be hard, but rather are just meant to be a reward for reading the book.

Midterm Exams (15% of your grade each):
There will be a two in-class midterm exams. These will be a mixture of multiple choice and free response questions.

Final Exam (30% of your grade):
There will be a scheduled final exam. These will be a mixture of multiple choice and essay questions.

Bonus Points (up to 10% bonus):
The bonus points will be based on class participation. Up to 10 percentage points of bonus are available, that is the course is graded out of 100 percentage points but 110 percentage points are available for credit. During the class, I will ask random students by name to answer a question I pose to the class. I expect an honest attempt at giving an answer that demonstrates paying attention to the class - ie. you dont have to give the right answer, only a thoughtful answer.

If you can not attend class due to illness, or participation in a university event (for example if you are on a sports team and have to travel) please email me in advance of the class so that you don't get called on during that class.

Office Hours: Generally I am available during the normal working day – with the afternoons being better than the mornings. You are also welcome to send an email to confirm an appointment in advance.

Web Sites: Homework, announcements etc. can be found on Owlspace.

Students with Disabilities: If you have a documented disability that will impact your work in this class, please contact us to discuss your needs. Additionally, you will need to register with the Disability Support Services Office in the Allen Center.